

# MISSOURI CONSERVATIONIST

VOLUME 78, ISSUE 10, OCTOBER 2017  
SERVING NATURE & YOU





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AND YOU

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Male green-winged teal

## MISSOURI CONSERVATIONIST



### ON THE COVER

A white-tailed buck sniffs the ground in early fall.

📷 **NOPPADOL PAOTHONG**

500mm lens, f/5.6  
1/160 sec, ISO 800

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# Inbox



## Letters to the Editor

Submissions reflect readers' opinions and may be edited for length and clarity. Email [Magazine@mdc.mo.gov](mailto:Magazine@mdc.mo.gov) or write to us:

MISSOURI  
CONSERVATIONIST  
PO BOX 180  
JEFFERSON CITY, MO 65102



## NEW FORMAT

The new format of the *Conservationist* is terrific. It is eye-catching and helps sustain interest. The articles are excellent, as usual. I especially like the *Wild Guide* feature.

Arlene Segal  
Gladstone

## SOLAR ECLIPSE

I viewed the eclipse at the August A. Busch Memorial Conservation Area. What an awesome, outstanding, and informative experience it was for this once-in-a-lifetime event! I can't say enough about the knowledgeable staff on hand at Busch – wildlife exhibits and information, including eclipse time charts and eclipse trivia, telescope viewing, shady areas, immaculate restrooms, and air conditioning if needed in the visitor center. I just can't say enough about how great our visit was.

Thanks Busch staff!

Kathy Kruse via Facebook

A friend from California joined us to watch the total eclipse, and we didn't want to disappoint. Kansas City was forecast with heavy clouds, so we went to Hart Creek Conservation Area that was right in the eclipse path and forecast for good viewing. When we arrived, we met A.J. Campbell, an MDC forester. He said Hart Creek and Three Creeks conservation areas were prepared for eclipse viewing. Trails were trimmed, large areas were mowed, and porta potties were nearby. Three Creeks is closer to Columbia, where most viewers went, so we had Hart Creek to ourselves. What a perfect day! We hiked the trails that overlooked the Missouri River and the Katy Trail. We watched the eclipse in clear skies and even had A.J. join us. He answered our endless questions about Missouri's conservation programs and truly made the eclipse trip memorable.

Thank you MDC and A.J. Campbell for giving us great memories.

Scott and Susan Bennett Kansas City

## TOP-NOTCH PUBLICATION

My daughter, Randi, of Florissant, introduced me to your publication last year. I subscribed and each month look forward to the next. I can't say enough about the diversity of the subject matter and the



Total solar eclipse on Aug. 21

accuracy of the content. I read every article word for word and am so impressed with the emphasis on conservation and recreation. I am learning so much about what we, who are interested in conservation and ecology, need to understand. Be assured that I place your publication at the top of my list over NWF, WWF, and National Geographic, although you are reaching a smaller audience. You have achieved excellence. Thanks so much!

Jim Anderson Batavia, IL

## READER PHOTO HASHTAG

I love this idea of reader photos [Page 3]. As a dad who spends a lot of time outdoors with kids, this gives me a chance to engage. I am sure I am not alone. However, most young parents stick to Instagram to share their experiences in Missouri conservation areas and parks. Your hashtag is just too long! If you found something shorter and easier to remember, I would definitely tag MDC in photos.

Phil Stroessner via email

*With so many hashtags floating around in cyberspace, it is difficult to find one that is unique. Our hashtag, #mdcdiscovernature, may be long but it gets our message across in one quick package. And the great thing about hashtags — once you use it, your account remembers it and it will come up automatically, so you never have to retype it!* —THE EDITORS

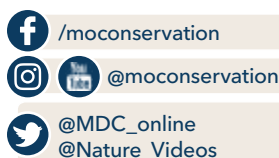
## PERMITS

I got an email about the fall hunting permits, and I must say, I purchased all my permits in less than three minutes. Thanks for having such a great system! Our MDC is awesome!

Mitchell M. Keithley via Facebook

KEVIN MUENKES

## Connect With Us!



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## Have a Question for a Commissioner?

Send a note using our online contact form at [mdc.mo.gov/commissioners](http://mdc.mo.gov/commissioners).





### Want to see your photos in the Missouri Conservationist?

Share your photos on Flickr at  
flickr.com/groups/mdc-readerphotos-2017,  
email Readerphoto@mdc.mo.gov,  
or include the hashtag #mdcdiscovernature  
on your Instagram photos.



1



2



3



4

1 | Fall wild turkeys by **Cheryl Sloan**, via Flickr

2 | Raccoon by **Brandon Franklin**, via email

3 | Robber fly by **ozarkflyfishing**, via Instagram

4 | Duck Creek Conservation Area  
by **tatoed\_countrygirl**, via Instagram

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LLOYD GROTJAN OF FULL SPECTRUM PHOTO



# Up Front

with Sara Parker Pauley

✳ **My love of the outdoors is tied to many things, including** time spent with some of my favorite people. For example, when I was about 10 years old, my dad took me on “our own” camping trip, meaning no brothers allowed this time, which was already a successful trip in my mind. Then Dad said, “Let’s see how we survive on one fishing pole, one lure (a Lucky 13 plug), one piece of foil, one match, one bottle of oyster sauce ...” You get the idea.

We headed to the Little North Fork River in Ozark County. Along about dark, as I was beginning to panic that my growling stomach would have to suffice on oyster sauce, a beautiful bass jumped to the surface and grabbed hold of the Lucky 13. Wrapped in foil, marinated in oyster sauce and roasted over an open fire, it was the most delicious bass I’ve ever eaten. Around the fire that night, my dad regaled me with adventures from his youth. I remember thinking this was the grandest adventure ever, and that my dad was pretty cool, too.

It turns out amazing outdoor adventures, even those that take it to the extreme outdoor limit, don’t have to be a million miles away. It can be close to home, right out your back door in Missouri, as you can see from the personal, real-life stories of extreme outdoor enthusiasts (see *Taking it to the Limit*, Page 17).

In the years since, I’ve had the privilege to travel the world, live abroad, and enjoy many outdoor adventures of my own. But the root of this love for the outdoors started simply like the story above, just my dad and some oyster sauce, without much in the way of expense or traveling far from home. It’s value to me? Priceless.

*Sara Parker Pauley*

**SARA PARKER PAULEY**, DIRECTOR

SARA.PAULEY@MDC.MO.GOV

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[mdc.mo.gov](http://mdc.mo.gov) 3

# Nature LAB

by Bonnie Chasteen

Each month, we highlight research MDC uses to improve fish, forest, and wildlife management.

## WILDLIFE MANAGEMENT

### Rocket-Netting

✳ **Trapping wood ducks can be tricky. They keep to the trees, you can't always see them, and they're skittish.** "We tried using floating traps with bait," MDC Resource Scientist Doreen Mengel said, "but predators targeted them."

She and her team of wetland managers around the state turned to using rocket nets instead. This technology is simply a net with the trailing edge anchored to the ground and the leading edge attached to rockets. Once fired, the rockets carry the net over the baited birds, trapping them.

"If you're dealing with a hunted species like wood ducks," Mengel said, "you need to know something about their population." Using rocket-netting, Mengel's team catches and bands lots of wood ducks, helping researchers and managers chart the birds' population, rate of reproduction, and rate of survival.

Many MDC researchers use rocket-netting. "Although it was first used to capture wild turkeys over a half century ago, rocket-netting still remains the most efficient way to capture eastern wild turkeys," said Resource Scientist Jason Isabelle.

Staff are highly trained, and they practice strict protocols to protect themselves and the wildlife they capture using rocket nets. MDC Resource Scientist Kevyn Wiskirchen uses rocket-netting in two current white-tailed deer research projects. "We work hard to

MDC researchers set a rocket net early in the morning to trap wood ducks.



This technology helps MDC capture many kinds of wildlife in order to monitor their populations

limit the animals' stress and get them back on their way as quickly as possible," he said.

Mengel said her team's best shot to date was at Ten Mile Pond Conservation Area near East Prairie. "The team ended up catching and banding over 300 birds on their first shot of the season," she said. "It was quite a scramble, but they did a great job working up the birds quickly and efficiently."

## At a Glance

"Boom nets" have helped MDC for decades

### 1948

Two Swan Lake National Wildlife Refuge employees developed the rocket-netting method to trap waterfowl

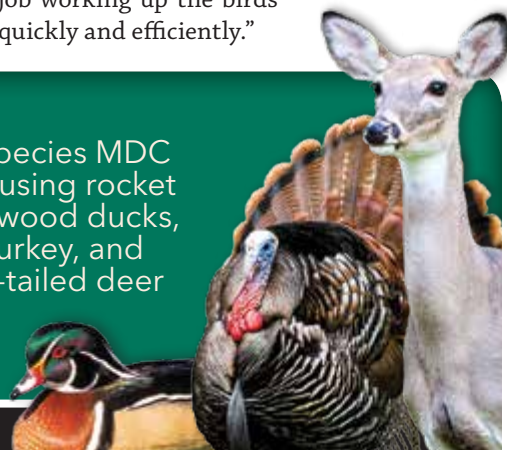
### 69 YEARS

MDC has used rocket nets

### 31

Number of MDC staff trained to use rocket nets

**3** Species MDC traps using rocket nets: wood ducks, wild turkey, and white-tailed deer



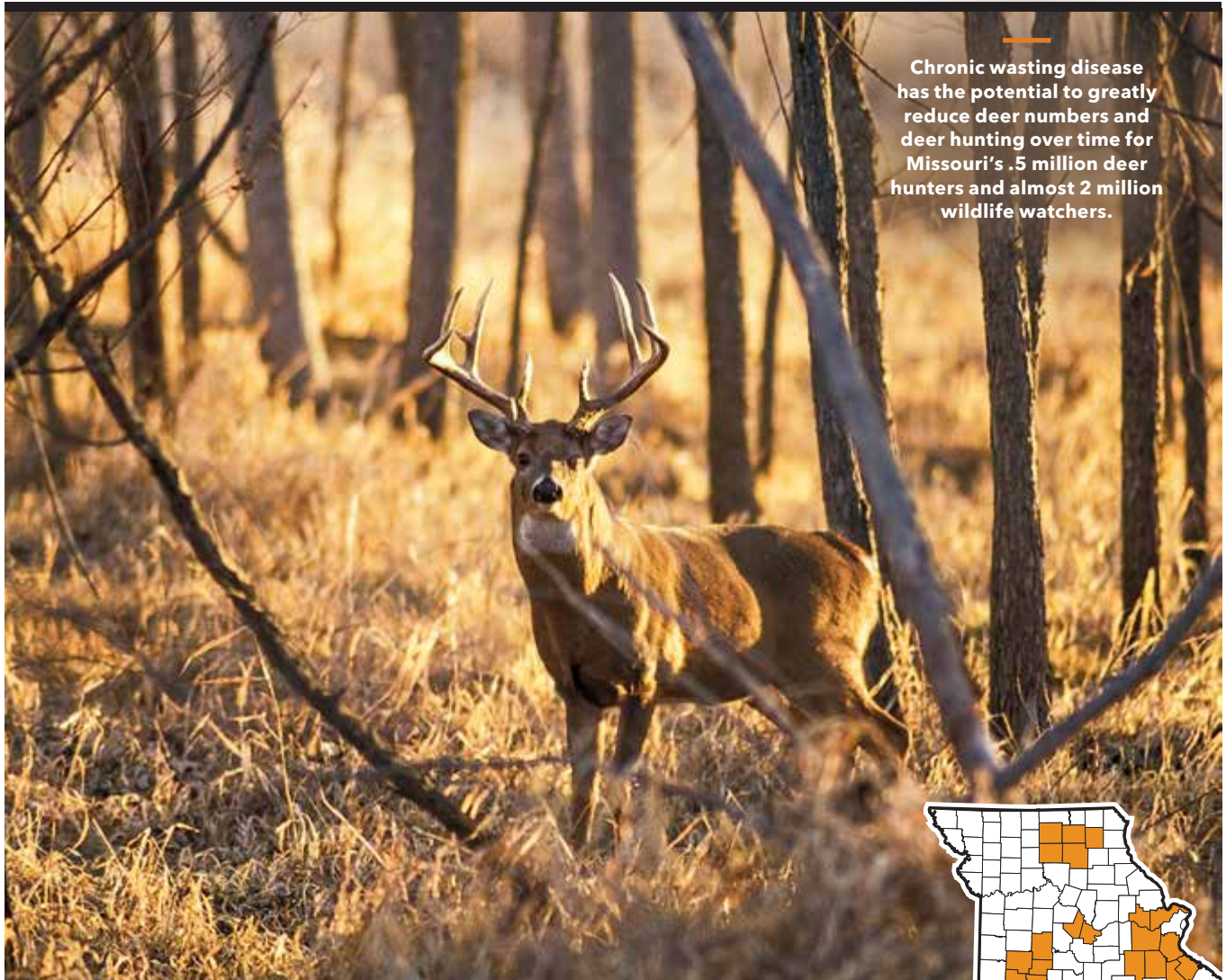
Learn more at [research.mdc.mo.gov](https://research.mdc.mo.gov)

ROCKET-NETTING: DAVID STONNER



# In Brief

News and updates from MDC



Chronic wasting disease has the potential to greatly reduce deer numbers and deer hunting over time for Missouri's .5 million deer hunters and almost 2 million wildlife watchers.

## DEER HUNTERS: WE NEED YOUR HELP

TO KEEP CHRONIC WASTING DISEASE (CWD) FROM SPREADING TO MORE DEER IN MORE AREAS OF MISSOURI, WE NEED TO FIND WHERE IT ALREADY EXISTS.

➔ Hunters who harvest deer in any of the 25 counties in the CWD Management Zone during the opening weekend of the fall firearms deer season (Nov. 11 and 12) must present their harvested deer at one of 56 CWD sampling stations.

Department staff will collect tissue samples to test the animals for CWD.

Counties where mandatory testing will occur include: Adair, Barry, Benton, Cedar, Cole, Crawford, Dade, Franklin, Hickory, Jefferson, Knox, Linn, Macon, Moniteau, Ozark, Polk, St. Charles, St. Clair, St. Francois, Ste. Genevieve, Stone, Sullivan, Taney, Warren, and Washington.

We also are offering voluntary CWD sampling opportunities throughout the deer season at more than 50 participating

taxidermists and at designated MDC offices in and around the CWD Management Zone.

Find sampling stations and get more information on CWD in our *2017 Fall Deer & Turkey Hunting Regulations and Information* booklet, available where permits are sold and online at [mdc.mo.gov/cwd](http://mdc.mo.gov/cwd).



CWD sampling continued on Page 6 »

## CWD SAMPLING (continued)

### Know Before You Go

- Sampling locations will be open from 7:30 a.m. until at least 8 p.m.
- Deer must be presented by the hunter who harvested the animal.
- Hunters will be asked to identify the location where the deer was harvested.
- Deer may be field dressed before being taken to a sampling station.
- Hunters can present just the deer head with about 6 inches of neck attached.
- For deer bound for taxidermy, the cape may be removed before sampling as long as about 6 inches of the neck is left attached.
- Hunters will be given information on getting free test results for their deer.

### Time-Saving Tips

- Telecheck deer prior to arriving at a sampling station.
- Have completed permit information ready.
- Be prepared to locate the harvest location on a map.
- Position deer in the vehicle so the head and neck are easily accessible.
- Have the detached head or cape with about 6 inches of neck ready for sampling.

## AUCTION SET FOR OCT. 21

In the market for a used vehicle or equipment? Come to the MDC public auction Oct. 21, at 10 a.m. at the Salem Maintenance Center, located at the junction of Highway 72 and Highway 32. The auction will include boats, outboard motors, tractors, trailers, farm equipment, vehicles, and more.

View auction items Oct. 20, at the Salem Maintenance Center from 8 a.m. to 5 p.m., with auction preregistration starting at 9 a.m. Registration the day of the sale begins at 7:30 a.m. A complete lot listing and terms of sale will be available at the registration desk the day of the auction.

Cash, check, and credit/debit cards will be accepted. As required by state statute, the department must charge a processing fee to all customers who pay by credit or debit card.

For more information, including a list of auction items and procedures, visit [mdc.mo.gov/auction](http://mdc.mo.gov/auction).



### Got a Question for Ask MDC?

Send it to [AskMDC@mdc.mo.gov](mailto:AskMDC@mdc.mo.gov)  
or call 573-522-4115, ext. 3848.

**Q: Last summer, I had seven baby owls that kept jumping out of the nest, with no sign of adults. If this happens again, what should I do?**

➔ The mother may have abandoned the nest. That happens sometimes. However, to avoid attracting predators, female birds do not sit on the nest 100 percent of the time, so the possibility exists that the mother is still tending to her young. It's also possible the birds are fledglings, and leaving the nest is what they do. They sometimes rest on the ground as they figure out how to fly, making them vulnerable.

According to the Cornell Lab of Ornithology, usually there is no reason to intervene. The parents may be tending to four or five young scattered in different directions, but they will return to care for them. You can watch from a distance to make sure the parents are returning to care for the fledglings.

The real answer to your question is let nature take its course.

**Q: I usually see one or two bats flying around at night, but I want to attract more of them. Do bat houses actually attract bats? And, where can I get plans to build one?**

➔ Location, temperature, and design are the key factors that attract bats to a bat house, according to Kathryn Womack, resource scientist.

Wherever bats live, they must find enough insects to eat, which explains their preference for roosts near aquatic habitats. And if you live near a cave or mine? Bonus points!

Known as "The Cave State," Missouri is home to 14 kinds of bats, all of which feed exclusively on flying insects, including agricultural pests and mosquitos. Because insects are not available as food during winter, bats survive Missouri's cold winter months by hibernating or migrating to warmer locales.

Unfortunately, many bat populations are declining at alarming rates, in part due to white-nose syndrome, a

fungal disease that affects bats during hibernation.

Bat houses help by giving these mammals protected places to roost the rest of the year. For bat house plans and information, visit [batcon.org](http://batcon.org).

Baby great-horned owls







Jelly mushroom

### Q: What kind of mushroom is this?

➔ This appears to be one of the jelly fungi, possibly *Dacryopinax spathularia*, known for its fan- or spatula-shaped appearance. It tends to form dense rows as it fruits through cracks in wood.

A diverse and complicated group, jelly fungi are translucent, irregular blobs that look and

feel like jelly or rubber. They may have short stalks and grow mostly on wood, but can sometimes be found on the ground. A few jellies are edible.

Some jelly fungi have appealing colors and amusing names – such as the bright-yellow witches' butter (*Tremella mesenterica*), a mushroom that resembles the one pictured here, but reproduces differently.

## What IS it?

Can you guess this month's natural wonder?

The answer is on Page 9.



## AGENT ADVICE

from  
**Jeremy Edwards**

DADE COUNTY  
CONSERVATION AGENT

With firearms deer season a little more than a month away, many hunters have visions of white-tailed deer dancing in their heads. Before the season arrives, be ready to safely pursue the deer of your dreams. A deer hunter's safety checklist should include the following:

- ➔ An operational deer rifle that has been sighted in.
- ➔ Appropriate clothing to suit the unpredictable Missouri weather.
- ➔ A hunting plan, left at home or at deer camp, that contains your hunting location, your contact information, the names of people in your hunting party, if applicable, and when you expect to return.
- ➔ A tree stand that has been properly secured, and a harness system to prevent accidental falls.

Remember, always enter and exit your tree stand with an unloaded firearm. Permits are available now, so buy them early. They are available through the MO Hunting app, at local vendors, or online at [mdc.mo.gov/permits](http://mdc.mo.gov/permits).











## CRAPPIE FRANÇAISE

Try this recipe for fresh crappie seasoned with lemon and herbs in a delicate mushroom sauce.

Serves 3-4

- 8-12 crappie, filleted
- 2 cups flour
- 4 eggs
- 1 Tbsp. chopped parsley
- 1-2 lemons
- 1 Tbsp. chopped oregano
- 1 stick butter
- ½ tsp. black pepper
- 1 tsp. garlic salt
- 2 cups fresh morels or button mushrooms, sliced
- 1 cup white wine

**MIX** herbs and spices with flour, and roll fillets with herbed flour in a plastic bag until coated.

**DIP** coated fillets in beaten eggs. Lightly fry fish in 3-5 tablespoons hot oil in large pan or skillet. Turn once.

**REDUCE** heat and add butter, wine, mushrooms, and juice of ½ lemon. Cover and simmer 10-15 minutes until mushrooms are soft.

**GARNISH** with lemon slices.

Watch a video for this recipe at [short.mdc.mo.gov/Z5S](http://short.mdc.mo.gov/Z5S).



Available  
Nov. 1!

### NATURAL EVENTS CALENDAR AVAILABLE

Discover nature every day, all year long with our *2018 Natural Events Calendar* – on sale now for \$9 plus tax.

The annual offering features stunning nature photography and daily notes about wild happenings. The perennially popular calendar measures 10 by 14 inches folded and 20 by 14 open. Along with amazing images of native animals, plants, and places, it also includes phases of the moon, numerous holidays and days of recognition, daily notes about natural events, and more.

Buy your copies of the calendar at MDC nature centers and regional offices, or call toll-free 1-877-521-8632. You can also order online at [mdcnatureshop.com](http://mdcnatureshop.com).

They make great holiday gifts!

## What IS it?

### EASTERN HOG-NOSED SNAKE

The eastern hog-nosed snake (*Heterodon platirhinos*) may range in color, but this medium-sized snake has one distinctive feature – its up-turned snout. When approached, this harmless snake can hiss loudly and spread its head and neck like a cobra. It may even “strike” – though it does so with its mouth closed. If this defense fails to ward off an enemy, the snake may thrash around, open its mouth, roll over, and play dead.

Photograph by Jim Rathert







# Visitors Welcome

NEW PROGRAM CREATES MORE  
OUTDOOR OPPORTUNITIES,  
COMPLIMENTS OF MISSOURI  
PRIVATE LANDOWNERS

by Jeff Esely

Missed opportunities weighed heavily on the mind of 10-year-old Luke Dierker that morning. It was the final day of youth firearms deer season, and he was definitely feeling the pressure. When a nice doe stepped into range, Luke knew the moment of truth had arrived. He took a deep breath and let his Remington 700 ring out across the Lamine River valley. The doe went down, and Luke's persistence was rewarded!





Quality hunting  
and fishing  
opportunities await  
MRAP visitors.

PHOTOGRAPH BY  
DAVID STONNER





The Dierker family takes a break after a morning deer hunt on the property of Don Knedgen.



Knedgen and Private Land Conservationist Dean Stucker review completed registration cards at the Knedgen Bottoms bulletin board.

To add to the excitement, Luke's dad, grandpa, little brother, and cousin all shared in the experience at that private farm in Cooper County. The Dierkers are a hunting family. Luke's dad, Ryan, age 33, started hunting when he was just 4 years old, learning much of what he now knows from his father, Jim. Today, Ryan is working to pass on the tradition to his boys and give them the skills they need to be successful. "I'm always looking for good places to take the family hunting," said Ryan Dierker. That's why he was intrigued when a friend told him MDC was working on a new walk-in hunting and fishing program for the state. "I got on the internet and quickly discovered the name of the program," Ryan Dierker explained. "It was the Missouri Outdoor Recreational Access Program."

## Program Rewards Landowners for Providing Access

Put simply, the Missouri Outdoor Recreational Access Program (MRAP) is designed to give people more opportunities to get out and enjoy nature. To do this, MDC offers incentive payments to private landowners who volunteer to open their property to the public for outdoor activities like hunting, angling, and wildlife viewing. While this concept may be new to Missouri, it's relatively old hat in other states like Kansas and Nebraska, where similar programs have operated for years.

In 2015, Missouri was one of 15 states to be awarded federal grant monies from the U.S. Department of Agriculture (USDA) to help fund recreational access programs. Through the Voluntary Public Access and Habitat Incentives Program (VPA-HIP), MDC is receiving up to \$1.1 million from the USDA Natural Resources Conservation Service for this effort. These funds, along with MDC and partner contributions, are being used to enroll 10,000 to 15,000 acres over a three-year period.

## Good for Landowners, Recreationists, and Wildlife

The main purpose of MRAP is to enhance public access opportunities for people in Missouri, especially in areas close to major urban centers and where public land availability is relatively limited. The idea is to provide more places for people to enjoy the outdoors closer to home.

MRAP can also provide a means for the public to use and enjoy private lands that have already been improved for wildlife through other programs, such as the USDA Conservation Reserve Program (CRP) or the Environmental Quality Incentives Program (EQIP). For example, Ryan Dierker and his family decided to deer hunt last season on the Knedgen Bottoms MRAP tracts. Prior to MRAP enrollment, these properties had already been enhanced for wildlife through the federal Wetland Reserve Program (WRP).

While the obvious benefit to landowners is the incentive payment they receive, MRAP participants can realize other advantages as well. One of the owners of the Knedgen Bottoms





MRAP is designed to give people more opportunities to get out and enjoy nature.

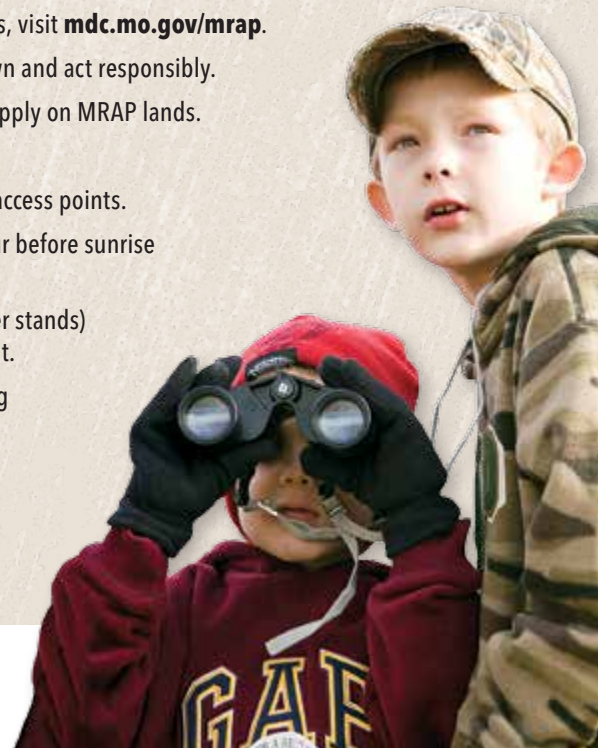


Quail hunters look for birds on an MRAP property.

## Find Private Land Recreation Opportunities Near You

- Approximately 8,400 acres currently enrolled in MRAP.
- For property listings, maps, and rules, visit [mdc.mo.gov/mrap](http://mdc.mo.gov/mrap).
- Respect the land as if it were your own and act responsibly.
- Remember that special regulations apply on MRAP lands.
- MRAP areas are walk-in only.
- Park and self-register at designated access points.
- Public access hours are from one hour before sunrise until one hour after sunset.
- No equipment or gear (including deer stands) may be left on the property overnight.
- Obey all Missouri hunting and fishing regulations.
- Familiarize yourself with the boundaries and do not trespass onto neighboring property.

Visitors enjoy fishing at the Hermitage Hills MRAP tract.







American goldfinch

MRAP tracts, Don Knedgen, explained. “We previously leased the hunting rights of our farms to an out-of-town company. A big reason that MRAP interested me and my father was that it offered us the chance to share the land with local hunters and give them a place to enjoy.” Many participating landowners also find value in the liability protection offered to them through Missouri’s Recreational Use Immunity Law. This statute offers immunity to landowners who permit outdoor recreation without charge or through a state-administered recreational access program such as MRAP.

Another primary goal of MRAP is to benefit wildlife populations on private land. Through various program incentives, participating landowners are encouraged to complete new wildlife habitat practices, which can benefit game and nongame species alike for years to come. This means MRAP potentially spells win-win-win for the landowner, the public, and Missouri’s wildlife.

## Different Properties Offer Different Opportunities

MRAP was designed to offer something for everyone. “We wanted Missouri’s public access program to be attractive to a variety of landowners and outdoor enthusiasts,” explained Lisa Potter, MDC private land programs supervisor. Therefore, not all MRAP properties are the same. Participating landowners choose the type of activities that may occur on their property. “They do this by selecting one of six access options,” Potter explained. These options include all-access hunting and fishing, small game and turkey hunting, youth hunting and fishing, archery hunting, fishing only, and wildlife viewing only. Currently, there are properties enrolled under four of these six access options. Whether you are looking for hunting, hiking, fishing, or bird-watching opportunities, it may be worth checking out MRAP.

## Quality Habitat Makes for Quality Experiences

“In order for this program to be successful, our enrolled properties must be capable of providing quality outdoor experiences to their visitors,” explained Private Land Services Division Chief Bill White. “Consequently, we established minimum size and habitat requirements for the program.” When a landowner offers land to MRAP, a detailed property evaluation is conducted to determine if the qualifications are met and to calculate the potential payment rate. Except for fishing-only properties, offered lands must be at least 40 acres in size and at least 20 percent of the property must consist of quality wildlife



Wild turkey

AMERICAN GOLDFINCH: JIM RATHER; SANDY CREEK: DAVID STONNER





Sandy Creek Wildlife Viewing Property, Lincoln County

habitat. To be designated as quality habitat, wildlife-friendly management practices must have been completed, or the area must score high on a habitat evaluation. Thus, MRAP guests are likely to observe a number of management practices, such as timber stand improvement, native grass establishment, or edge feathering during their visit.

Anticipating that the number of acres offered by land-owners would quickly exceed funding levels, MDC developed an application ranking system to select the eligible properties that promise the best outdoor experiences for visitors. Criteria such as habitat quality and quantity, willingness to implement new habitat management practices,





property size, and location all go into the ranking calculations. Eighty-two percent of MRAP guests rated the habitat as good or excellent during the 2016–17 hunting season, suggesting that desirable properties are being enrolled. In fact, over 50 percent of the acres enrolled in MRAP are designated as quality habitat.

## Recreating on MRAP Lands

Finding suitable MRAP lands to visit is very similar to finding MDC conservation areas online. To search for MRAP lands that host your intended activity, visit [mdc.mo.gov/mrap](http://mdc.mo.gov/mrap). “Our first step was to find enrolled properties on the internet,” explained Ryan Dierker. “Then we picked out two properties in our target area that allowed deer hunting. We printed maps of those properties and went to check them out. The property boundaries were pretty well marked with MRAP signs, which was very helpful. Ultimately, we decided to hunt on the Knedgen Bottoms tracts.”

Visitors should keep in mind that MRAP properties are not the same as public lands. While MRAP tracts must contain minimum amounts of wildlife habitat, many of the properties also include areas with limited wildlife value, such as pastures and hayfields. In addition, visitors shouldn’t expect to see many of the amenities like mowed walking paths, wildlife food plots, and gravel parking lots that are common on MDC areas. “Unless designated otherwise, parking is along public roadsides,” explained Potter. “Approved parking locations are shown on the property maps.”

## Looking to the Future

Like any fledgling program, MRAP faces a number of unknowns. One big question is whether visitors will treat the enrolled lands with respect and follow the rules. That was one of Don Knedgen’s concerns when he decided to enroll his farm. “So far, people have been keeping the area cleaned up, and we haven’t noticed any problems or damage,” Knedgen said. Ryan Dierker agreed that public behavior will probably dictate the future success of the program.

Bill White wonders how the program might impact neighboring landowners and how wildlife numbers on enrolled properties will respond. Surveys of public visitors, participating landowners, and neighbors are conducted to evaluate these types of questions, make needed program changes, and assess future program improvements.

As far as Ryan Dierker is concerned, MRAP could have a big future in Missouri, and he is excited about the possibilities it holds. “MRAP opens up new opportunities for guys like me and my family who are willing to try new things and put in the work. In the future, I hope to see even more land in the program,” Dierker said. ▲

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*Jeff Esely has worked for MDC for 12 years and currently serves as the MRAP manager. An avid hunter and angler, Jeff enjoys working with MRAP because the end result of the program is new places for Missourians to get out and enjoy the outdoors.*



## Is Your Land Right for MRAP?

- MDC is currently accepting applications for 2018 enrollment.
- The deadline to apply is Nov. 1.
- Minimum 40 acres of land or 1 acre of fishing impoundment.
- Land must have existing quality habitat such as native grasses, managed forests, or restored wetlands.
- You can determine the permitted activities.
- You can continue most farming and property management activities.
- State law offers liability immunity.
- For more information, contact your local MDC representative or visit [mdc.mo.gov/mrap](http://mdc.mo.gov/mrap).



# Taking it to the LIMIT

OUTDOOR ENTHUSIASTS TAKE EXPLORING NATURE TO THE EXTREME IN MISSOURI

by Heather Feeler | photographs by David Stonner

**H**ollywood has made outer limits recreation, or extreme outdoor adventures, a blockbuster story. Reaching the summit of Mount Everest in a storm. Rock climbing El Capitan with no ropes or anchors. Traveling in a small boat around the southern tip of South America in turbulent waters. All real-life stories of outdoor enthusiasts exploring nature to the extreme and finding something deeper about themselves in the process.

While Missouri may not have Mount Everest-size mountains or massive oceans, it does offer outdoor recreation opportunities on a grand scale with vastly changing landscapes. It provides mighty forests and prairies, big rivers and streams, and scenic rock-face overlooks and hidden caves, plus more than 1 million acres of public land to explore. Missouri is an incredible place to discover nature.



Missouri also has extreme outdoor enthusiasts, who have tested their limits in the wildest places and come out on the other side with an incredible story. For some, it's a once-in-a-lifetime adventure. For others, it's an annual experience. And for one, it's just a daily part of life. These are three stories of how the outdoors have changed the course of their journey, the rough roads and the smooth paths, and how it has also left them hungry for more outdoor adventures.

### THE TRAIL-BLAZING HIKER

Deep in the heart of the Ozarks, the Ozark Trail is a hidden gem. With more than 350 miles of trail, starting north from Onondaga Cave State Park and traversing south through much of the Missouri Ozarks, it provides hikers the opportunity to walk short stretches or to go to the extreme and cover hundreds of miles of ground. Bruce Linders is one of those hikers.

Linders, a St. Louis native, gained his appreciation and love of the outdoors after high school when he joined American Youth Hostels (AYH). Two brothers who were active in the organization taught Linders everything they knew about canoeing, camping, backpacking, and hiking. Linders joined AYH in 1976 and would later chair the hiking and backpacking committee.



"Missouri has so much to offer. I want to take people out and show them what it is all about."

*Bruce Linders*





"I found a purpose, I guess you could say. I discovered I loved hiking and backpacking, and I would lead a trip a month," said Linders.

He also began to dream bigger during those day hikes. He wanted to organize a week-long trip where people could rigorously hike the Ozark Trail, carrying only the essentials on their back, and camp under the stars at night. It would be a week of growing personally through hours on the trail, but it would also be a chance to build camaraderie with others around the campfire. For his first trip, he and two friends planned for 12 backpackers, but only one showed up. Luckily, Linders did not give up.

More than 28 years later, he is still helping organize and lead a week-long backpacking trip every October on the Ozark Trail. The group has now grown to around 25 people, but he tries to keep the number capped to ensure the group stays small enough for all to enjoy themselves. The team hikes close to 50 miles of the Ozark Trail, starting off in different sections, with some heading south and others north. Linders has hiked every single mile of the Ozark Trail. While it is an extreme feat, his success has not come from his own personal miles on the trail, but from the others he has encouraged along the way, including some who have needed the trail for more than just adventure.

On one trip, Linders recalls three women who came to hike the trail together, including two who were police officers. One of the friends was desperately trying to pull herself together from a traumatic event and build her confidence back up. The hours on the trail helped heal her hurt, noted Linders. It is this story still fresh in his mind, and countless others, that keep him returning year after year.

"You realize you've actually done something in your life that has helped people and brought them to the outdoors," he said. "Missouri has so much to offer. It's one of the most beautiful states there is, and I want to take people out and show them what it is all about."

## THE BIG RIVER KAYAKER

Janet Moreland, a middle school science teacher in central Missouri, grew up in California with water all around her. She spent much of her childhood swimming in local streams and rivers and would later take it up a notch with windsurfing in the ocean. But it is the big rivers, such as the Missouri and Mississippi, which have caught Moreland's attention since moving to Missouri.

**Bruce Linders leads a small group of hiking enthusiasts on the Ozark Trail.**

"I had all the background of extreme outdoor stuff, including working on ski patrol in the Sierra Mountains, and then I landed in Missouri, so I started looking around for something extreme to do," said Moreland.

She found it by the Missouri River. Moreland, who would talk to paddlers coming off the river, became intrigued by the idea of kayaking the mighty Missouri River. Not just some of it, but all of it. After months of research, including interviewing kayakers who had successfully traveled all of the Missouri and Mississippi rivers from Montana straight through to the Gulf of Mexico, she began her solo journey in April 2013. She set off to become the first woman and first American to paddle all of the Missouri-Mississippi — the longest river in North America — from source to sea by herself in a kayak. She was 57 years old.

She started her journey on skis, traveling down Centennial Mountain in Montana, where the headwaters of the Missouri and Mississippi river start and then put in her kayak, named Blue Moon, shortly after. On the second day in the water, she got two holes in her kayak, so she learned quickly how to get industrious with duct tape. It was her first lesson in having an adventurous spirit in the outdoors.

"When I hit my first rapids, I realized I had to make all the decisions out here by myself and to assess all the possibilities of what could happen," reflected Moreland.



"This state is full of rivers to paddle, places to camp, and areas to get out and experience the wilderness."

*Janet Moreland*





Janet Moreland paddles in her kayak along the mighty Missouri River.

She paddled through storms and high winds, lakes that stretched 200 miles, 13 dams along the river, and came face-to-face with wildlife when she pitched her tent. While every day was a memorable new adventure, it was the people she met along the way that created the most lasting memories.

"When you talk to long-distance paddlers, they will tell you people on the river are the most important part of your journey. They give you love," she said. "It's something they wouldn't do themselves [paddle long distance], but they want to help you get there and be successful."

Moreland finally paddled into mid-Missouri in September, after being on the water for five months, and slept in her own bed for the night. She was soon back in the water to tackle the last part of her trip. She would arrive at the Gulf of Mexico in December with a team of friends and family cheering her on. While exhausted beyond measure, she crossed the finish line with mixed emotions.

"It was bittersweet to finish because I really wanted to finish, but I also wanted the river to keep going. I wanted to keep living off the land. I loved the simplicity," said Moreland.

But Moreland, a self-professed extreme outer-limits fanatic, was not quite finished. She set her eyes on a solo kayaking mission on the Mississippi River in 2016. Although she hoped to finish in 60 days in honor of her 60th birthday, she finished her trip in 65 days. This summer, Moreland again climbed in her kayak to tackle all of the Yukon River, the third largest river in North America. Her heart, however, will always be in Missouri.

"There is so much wilderness in Missouri that is so accessible to people," noted Moreland. "This state is full of rivers to paddle, places to camp, and areas to get out and experience the wilderness."

## THE FERVENT FLY FISHERMAN

Until he was 12 years old, Mark Van Patten was more concerned with staying alive as part of a west-coast gang than playing outdoors with friends. His tumultuous childhood eventually led to him being raised by his grandparents in Missouri where his grandfather, a fly-fishing purist, took him immediately to a pond to start his fishing education. It was a lesson that would impact the rest of his life.

"Fly-fishing is what saved me, and also that my grandparents were saints," said Van Patten. "It kept my interest even at a young age. If it eats anything bigger than plankton, you can catch it on a fly. The science of it got me hooked."

As Van Patten continued to learn more from his grandfather, his love of science also developed as he waded in stream after stream in Missouri going after the perfect catch. As an adult, he would turn his love of science into a conservation career in fisheries with the Missouri Department of Conservation. He retired in July 2016 and moved back to the Missouri Ozarks with his wife, a retired middle school science teacher, where his love of fishing had first been nurtured as a child. The one constant through his life has been fly-fishing.

"I've fished thousands of miles of Missouri streams, even small farm ponds, and on average I fished 130 days each year even when I had to work. If it had water and fish in it, I was probably going to fish it," remarked Van Patten.

His fishing adventures extend from fly-fishing for goldeye from a canoe on the Missouri River to fly-fishing for catfish or carp, also called Ozark bone fishing, in southern Missouri. Van Patten

Mark Van Patten shares his knowledge and love for fishing with a new angler.



has also explored the extreme fishing waters in Missouri, which are smaller streams and often more difficult to fish, where you have to sneak up on the fish. He also still ties his own flies, a skill he learned from his grandfather and has continued to build upon. Van Patten points to the value of mentoring both beginners and seasoned anglers.

“People love to share the gospel of fly-fishing. There is so much to be passed on from a mentor that you can’t learn in a book or video. Us old guys have a lot to share, and we love to share it,” he laughed.

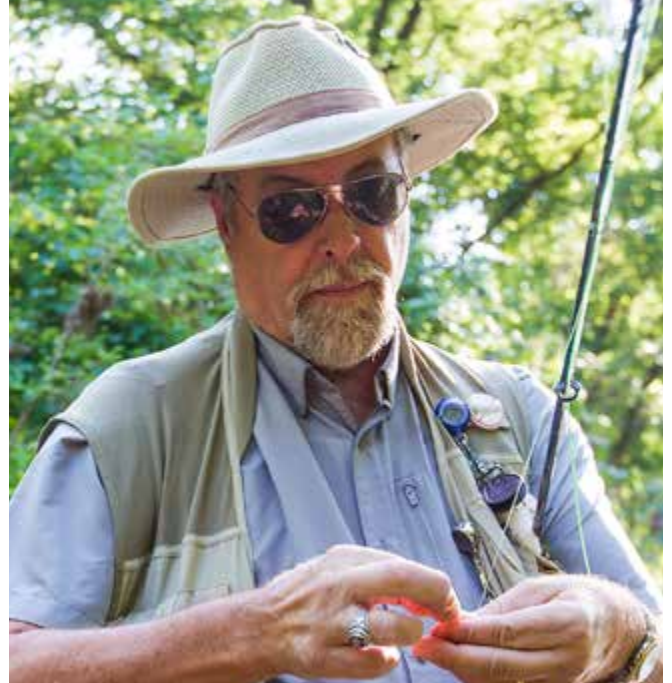
Van Patten also stays on top of his game through extreme fishing in the Alaska wilderness alongside grizzly bears or through fly-fishing in salt water for monster ocean fish. But it is the waters of Missouri that always call him home, the place he first learned to hope again after a tough childhood on the streets.

“Almost every trip I make to the Current River is the most memorable trip because you see so much,” he said. “My home waters are always my favorite waters.”

Missouri is an incredible place for extreme outdoor adventures, whether it’s distance hiking in the Ozark forest, kayaking the fast-flowing waters of big rivers, or casting your fly rod as the sun comes up on a chilly morning. It’s where some of the best life stories are waiting to be written — by you. ▲

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*Heather Feeler, communications manager with the department, loves exploring the Missouri outdoors, including hiking and fishing with her family. She is rarely extreme.*



“People love to share the gospel of fly-fishing. There is so much to be passed on from a mentor that you can’t learn in a book or video.”

*Mark Van Patten*







Eastern black walnut trees  
grow tall in Stockton.

PHOTOGRAPH BY DAVID STONNER





*Bountiful,  
Beneficial*

# Black Walnuts

PRIZED FOR THEIR NUTS AND EXCEPTIONAL WOOD,  
**EASTERN BLACK WALNUTS** ARE A BIG PART OF MISSOURI'S  
LOCAL TRADITIONS AND ECONOMIES

by Kristie Hilgedick



# EVERY FALL,

the limbs of thousands of Missouri eastern black walnut trees release a treasure trove of sustenance. For hundreds of Missouri families, harvesting black walnuts — a wild, native crop — is a tradition spanning generations.

## Continuing the Tradition

Every fall, Brent Rutledge, 50, takes a breather from his Cedar County cow-calf operation to harvest the nut crop from his family farm. Once collected, the nuts are delivered to the Hammons Products Company in Stockton where they are processed for sale.

“I remember doing it as a school kid — my mom gave me money for it — and I turned it into a tradition for my own family,” Rutledge said. “It’s something we could do together for a couple of hours after my kids (now college-aged) got off the school bus.”

For Rutledge, it’s not a main source of income, but a way to support his extended family — his brothers work at the Hammons plant — and save for Christmas.

Unlike other nut crops that grow in carefully tended orchards, eastern black walnuts grow naturally in the woods, pastures, and yards of the east-central United States. Every fall harvest, Hammons purchases millions of nuts from more than 200 hulling stations in a 12-state area. More than half of those buying stations are in Missouri.



“

When you get a black walnut, you know you are getting a unique, native Missouri product.”

—Brian Hammons,  
Hammons Products  
Company CEO



## Growing and Processing Black Gold

The trees can be grown either plantation-style or cultivated in the wild. Nuts from improved varieties produce higher yields compared to uncultivated wild trees and are purchased by Hammons Products at a higher rate.

The reasons people hand-forage the crop every fall are diverse, said Brian Hammons, CEO.

FFA clubs collect the nuts to raise funds to support their activities. Families use the money to pay for vacations they otherwise couldn’t afford. Parents use it as a way to teach their kids a work ethic. Homeowners just want to be able to mow the yard again.

“I’ve heard all kinds of stories,” Hammons said. “Some people need the money and pick up thousands of pounds every year. The money they earn pays for shoes and winter coats. They’re very resourceful.”

Stockton grocery store owner Ralph Hammons launched the company in the mid-1940s when he purchased a cracking machine and began to buy the nuts from the locals. Today Hammons is the world’s primary hulling purchaser, processor, and distributor of black walnuts.

DAVID STONNER





Hammons Products Company in Stockton has developed a proprietary process for cracking the nuts and removing the hard shell pieces, so they can be sorted, graded, sterilized, and packaged for distribution. A portion of the crop is stored in net bags outdoors, where the unprocessed nuts exude a pleasant robust and earthy fragrance.

The company uses a proprietary process to crack and remove the hard shells. Once separated, the nut meats are sorted, sterilized, and packaged for sale. Every part is used, including the tough outer hull, which is ground into fine pieces and included in products such as abrasive cleansers and exfoliating cosmetics.

The nuts — high in protein, antioxidants, and unsaturated “good” fats — are also distributed via grocery chains such as Walmart, Kroger, Costco, and Sam’s Club.

“Ice cream is our big market,” Hammons said.

Unlike orchard-grown English walnuts, black walnuts have an intense flavor. The company engages in marketing campaigns and social media outreach efforts to educate the public on how to use the nut.



“It’s a bit of an acquired taste,” Hammons said. “But knowledgeable foodies appreciate the flavor, which is complex, bold, and robust. When you get a black walnut, you know you are getting a unique, native Missouri product that has a lot of historic tradition.”

Eastern black walnuts are an alternate-bearing crop, which means they produce a larger crop every other year. Some years, the company can only purchase 10 million pounds, other years, up to 30 million pounds are harvested.

“We try to buy as many as we can because the next year there’s a good chance the harvest will be down again,” Hammons explained.

**Do you have black walnut trees on your land?** Would you like to harvest the nuts or have local gatherers harvest them for you? The buying season runs from Oct. 2 through the first week of November. To find buying stations and huller operators near you, call 417-276-5181 or visit **[black-walnuts.com](http://black-walnuts.com)**.



## Eastern Black Walnuts' Untapped Potential

Nuts aren't the only value eastern black walnuts provide.

The species represents an opportunity for landowners to realize a new stream of revenue — if they are willing to manage stands of the high-value trees and be patient, said Harlan Palm, a walnut tree farmer and member of the National Walnut Council (NWC).

Palm got started in 1973 when he read a *Farm Journal* article about thieves stealing the trees from Iowa farms.

"I knew then that walnut trees must be worth raising if the value is so great that someone wants to steal them!" he said. He soon purchased 30 acres of forested land in Callaway County.

On Palm's farm, the previous owner pastured livestock in the creek bottoms. Palm took the farm in a new direction, pruning young, volunteer walnut trees, culling ones with poorer form, and eliminating invasive brush species.

Palm has benefited by managing the growth of black walnut trees, and he thinks that, with more knowledge, other landowners also could.

"There's definitely an untapped potential," Palm said. "Walnut timber is the most valuable timber you can raise in Missouri."

According to the U.S. Department of Agriculture (USDA), walnut timber in the United States is valued at \$530 billion.

Current national walnut prices are very good. In 2015 and 2016, the price of high-quality walnut has risen to almost \$2,800 per thousand board feet — the highest prices since 1970. The price of "stumpage" — what a logger is willing to pay for a standing tree — is also the highest it's been since 1990.

When foresters evaluate trees, they look for 17- to 22-feet of relatively straight trunk unencumbered by limbs.

"We're typically looking for logs without blemishes, knots, or branches," explained MDC Forest Products Program Supervisor Mike Morris. "And bigger is better because the veneer potential increases with the size of the tree."

He noted black walnut is Missouri's most-valuable species and the export market — particularly to China — is supporting the industry. The U.S. housing market, which uses walnut in higher-end homes for trim, beams,



millwork, and flooring, has not rebounded yet from the 2008 crisis, Morris added.

With work and attention, Palm believes landowners could realize a 10-fold increase by pruning saplings to create taller, straighter trees. "If the pruning is done properly, it could be 60 to 65 percent qualifying for veneer-potential, rather than just saw logs for lumber," he said. "Pruning is essential to increasing value."

To learn more about pruning techniques, contact MDC's Forestry Division at [mdc.mo.gov](http://mdc.mo.gov) or the National Walnut Council (NWC) at [walnutcouncil.org](http://walnutcouncil.org).

Eastern black walnuts are prized for their rich, dark heartwood. Not only is the wood moderately heavy and strong for its weight, it's also exceptionally stable when dry. It machines well — leaving no splinters or rough edges — and is excellent for carving.

Time is of the essence: The best time to ensure eastern black walnuts become the key component of an eventual timber stand is within five years after conventional agricultural practices have idled, said grower Harlan Palm. To improve their prospect, landowners can simply heel-in walnut nuts in the fall or plant seedlings in the spring.



Harlan Palm's farm in 1977

Palm in the same spot 40 years later



TIMBER: NOPPADOL PAOTHONG; PALM FARM: COURTESY HARLAN PALM; HARLAN PALM: DAVID STONNER





### Thousand Cankers Disease (TCD) has not been discovered in Missouri.

But if the disease ever is introduced here, walnut growers fear millions of dollars in economic damage.

TCD occurs when thousands of tiny walnut twig beetles attack a tree, feeding on the pale-green phloem tissue beneath the bark. As they tunnel along, the beetles carry the spores of a fungus that quickly creates “cankers,” or inky, coin-sized spots of infection. Branches start to die back, and the tree eventually dies.

To combat TCD, Missouri enacted a quarantine making it illegal to transport all species of untreated walnut wood and any hardwood firewood into Missouri from states where the disease has been detected. Exemptions exist for nuts, finished walnut wood products, and 100 percent bark-free, kiln-dried lumber with squared edges.

One of the first symptoms landowners might notice is die-back from the top of the tree in mid-July through early August. Landowners who have concerns are encouraged to contact their local MDC forester, the forest pest hotline at 866-716-9974, or use the online reporting form at [mdc.mo.gov/thousand-cankers](http://mdc.mo.gov/thousand-cankers).

## The Promised Land

Growing black walnut timber can take 50 to 75 years, depending on soil type and landscape, so it’s not a get-rich-quick scheme. But it can be a way to nurture income for the next generation. Although the prospect is not without work, creating a stand of high-quality walnut timber isn’t insurmountable.

And Missouri landowners have an edge.

With twice as many eastern black walnut trees as any other state, Missouri is “way out in front in the number of walnut trees,” Palm said.

Why does Missouri lead the nation?

Partly because Missouri’s temperate weather and soil types are well-suited to this valuable, native crop. And partly because the glaciated plains of Illinois, Indiana, and Iowa are so productive, agriculturally, that only rarely has farmland in those regions been allowed to revert to its natural landscape. In Missouri — where crop farming conditions are less ideal and agricultural practices have changed over time — small, odd-shaped tracts of cropland and pasture increasingly lie fallow today, Palm said.

“These tracts were farmed for decades, but now are idled because they are too small or too difficult to reach with modern, larger field equipment,” he explained. “The old two-, four- and six-row planting and harvesting equipment fit such fields very well in the past. But today’s 60-foot-wide equipment no longer fits.”

Harlan has met farmers who felt abashed they no longer farmed areas their grandfathers planted. But when they learn those areas are suitable for growing walnut trees, they’re intrigued, he said.

## The Necessary Ingredients

Black walnut trees require full sunlight to thrive and do best on deep, fertile, well-drained soil. Because the seedlings need sunlight, they prefer open areas where the soil has been disturbed, as opposed to dense forests. They like to grow alongside streams and can tolerate inundations for a few days. But they can’t take long-term flooding, so you won’t find them in the vast bottoms of Missouri’s great rivers.

They have a favorite soil type: Hammond or Landis silt loam. Loams are considered ideal for agricultural uses because they retain nutrients and water, while still allowing excess water to drain away.

Black walnut is used for furniture, gunstocks, housing trim, paneling, cabinets, musical instruments, and many other products.



A unique crop, eastern black walnut trees enjoy a symbiotic relationship with squirrels, since most trees grow from cached nuts. This results in uneven-aged stands of volunteer saplings and resprouts from harvested trees.

“Squirrels are good at planting walnuts, just not in rows,” Palm lamented, noting the animals typically bury them within 75 feet of an established tree.

On good soil, the species competes well with other species and can be fast-growing. Given adequate space and the right soil, they’ll develop spreading canopies and can grow quite tall — up to 80 feet.

Missouri’s native black walnuts offer landowners lots of benefits — the joys of annual nut harvest and the value of a long-term investment. If you’d like to know more about growing eastern black walnuts on your land, call your regional forester. Find regional office phone numbers on Page 2. ▲

*Kristie Hilgedick serves on MDC’s communications team. She enjoys traveling to new places and spending time outdoors.*



# Get Outside

in OCTOBER →

Ways to  
connect  
with  
nature



Blue jay

# 1

## BAND OF BLUE BROTHERS

Blue jays are flying in flocks this time of year. This band of blue usually contains 10 to 30 birds.



ST. LOUIS REGION

## Deer – Venison Cooking

# 2

Tuesday, Oct. 17 • 6-9 p.m.

Jay Henges Shooting Range

1100 Antire Road, High Ridge, MO 63049

Registration required; email [henges.range@mdc.mo.gov](mailto:henges.range@mdc.mo.gov) with the full name and phone number of participant by Oct. 16

Do you want to learn how to prepare and cook deer meat? Then join us for an evening of venison cooking that everyone will enjoy. We will discuss the supplies and equipment needed as well as provide several recipes you can take with you.

# 3

## DUCK, DUCK, DUCK

Its peak time for ducks! Look for green-winged teals, American widgeons, **pintails**, and gadwalls at lakes and rivers near you.



### Natural Events to See This Month

Here's what's going on in the natural world.



Dark-eyed juncos arrive from Canada



Hellbender breeding is at its peak



Striped skunks are fattening for winter



Find more events in your area at [mdc.mo.gov/events](http://mdc.mo.gov/events)

# 4

## THE SKY IS FALLING

The Orionid meteor shower peaks on Oct. 21. Head outside and catch a glimpse of nature's fireworks.



# 5

## BUSY BEAVER

Beavers are busy during the day, gathering food for the winter. Be vigilant! You may catch them hard at work.

OZARK REGION

## Night Senses

# 6

Saturday, Oct. 28 • 7-9 p.m.  
Shepherd of the Hills Fish Hatchery  
483 Hatchery Road,  
Branson, MO 65616  
Registration required;  
call 417-334-4865 by Oct. 26

This is our annual family-friendly Halloween night hike. Come join us to learn how our amazing wildlife use their senses at night. You will visit five different stations, which will include sound, sight, taste, hearing, and touch. The short hike will end at the Conservation Center for snacks.



Eastern  
screech-owl



Bullfrogs  
begin  
hibernation



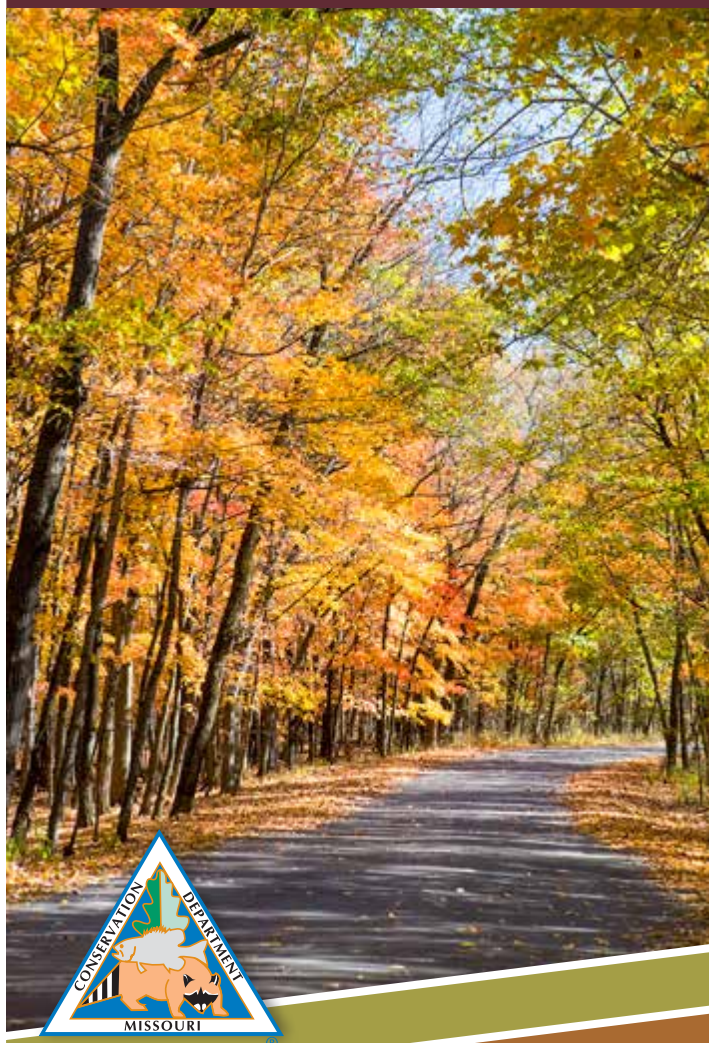
Lady  
beetles  
congregate  
on the  
sunny side  
of houses

# DISCOVER NATURE THROUGH FALL COLOR ADVENTURES

Travel most anywhere in Missouri to see a variety of trees that show off a fantastic array of color in the fall.

Find fall color through drives along rivers, on back roads, hikes or float trips under a colorful forest canopy. Conservation areas and state parks are also great places to see fall color.

Get MDC fall color updates at  
[mdc.mo.gov/fallcolor](http://mdc.mo.gov/fallcolor)





# Places to Go

## SOUTHEAST REGION

### Peck Ranch Conservation Area

More on the menu than just elk

by Larry Archer

✦ As the epicenter of the Department of Conservation's elk restoration efforts, Peck Ranch Conservation Area's signature feature dominates visitors' time and attention.

"The most common use in October is elk viewing," said Peck Ranch CA Manager Preston Mabry. Driving tours through the area's refuge, especially when taken right after dawn and right before dusk, offer visitors the best — but not guaranteed — opportunity to view elk. The refuge is closed during parts of October for managed deer hunts, so a check of the department's website when planning a trip could stave off disappointment.

But Peck Ranch, with its 23,763 acres in the Ozarks region of south-central Missouri, has much more to offer in addition to elk. With four natural areas totaling more than 5,800 acres, access to 11 miles of the Ozark Trail, a viewing deck, and several viewing blinds, the opportunity exists for experiencing an abundance of nature.

The area's combination of woodlands and glades also offers bountiful opportunities for bird watching. More than 50 species of birds have been documented in October at Peck Ranch, and it is included in the Great Missouri Birding Trail.

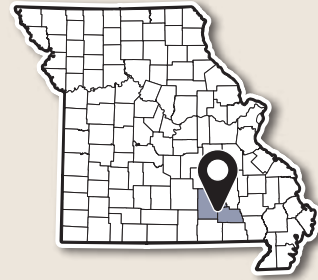
Like a restaurant best known for its most popular dish, Peck Ranch CA has more on the menu than just elk.



**Peck Ranch CA offers auto driving tours for nature viewing, but there are some dates the refuge is closed for managed deer hunts. Visit [mdc.mo.gov](http://mdc.mo.gov) before planning your trip.**

PECK RANCH CA: DAVID STONNER;  
ELK: NOPPADOL PAOTHONG





## PECK RANCH CONSERVATION AREA

northwest Carter County and eastern Shannon County, northeast of Winona. From Winona, take Route H east 5 miles, then continue east on gravel 7 miles to the area in Carter County.

N37° 3' 2.7216" | W91° 10' 28.9776"

[short.mdc.mo.gov/Z55](http://short.mdc.mo.gov/Z55) 417-256-7161

## WHAT TO DO WHEN YOU VISIT



### Archery and Firearm Ranges



**Bird Watching** Included on the Great Missouri Birding Trail, the area includes representatives of glade, woodland, and forest interior species.



**Camping** There are five designated primitive camping areas, including three with disabled accessible privies.



**Hiking** In addition to access to 11 miles of the Ozark Trail, the area includes a one-half mile nature trail.



**Hunting** Deer (good) and turkey (good). Managed deer hunts are held within the wildlife refuge, but turkey hunting is only allowed outside the refuge. Deer and turkey regulations are subject to annual changes, so refer to the *Spring Turkey* and *Fall Deer and Turkey* booklets for current regulations.



**Nature Viewing** Auto tour for elk viewing peaks in October. Check the department's website for dates when the refuge is closed for managed deer hunts. The area also includes a viewing deck overlooking a beaver pond, three viewing blinds, and several open vistas.

## WHAT TO LOOK FOR WHEN YOU VISIT



Northern harrier



Carolina wren



Eastern collared lizard



Lichen grasshopper





## Black-and-Yellow Garden Spider

*Argiope aurantia*

**Status**  
Common statewide

**Size**  
Length (not counting legs):  $\frac{3}{4}$ –1 inch (females); about  $\frac{1}{4}$  inch (males)

**Distribution**  
Tall grasslands and vegetation near homes statewide



**Spiderling ballooning**

### Did You Know?

Black-and-yellow garden spiders help control insect pests and are particularly appreciated by gardeners. Because of their colorful patterns, localized nature, remarkable web architecture, and easily observed behaviors, these spiders are excellent creatures for children and adults to watch.

Chances are this large, black-and-yellow spider looks familiar to you. It builds its web in gardens and grassy areas near homes. In fact, you could call this spider a squatter because once it's established residence, it tends to stay put for the duration of the season. This spider guards its home through movement. When disturbed, this species often causes its web to vibrate, making it harder for predators to capture them.



### LIFE CYCLE

Young spiderlings hatch in spring and disperse by ballooning on strands of silk that catch the breeze. Once mature, they breed only once. The much-smaller male begins the courting ritual by plucking strands of the female's web. All summer, females eat insects and create large egg cases that can contain over 1,000 eggs each. As temperatures cool, the female slows and dies in the first frosts.



### FOODS

A variety of insects may fall prey to this spider, especially grasshoppers and katydids. Once an insect is caught in its web, the spider often shakes the web to more fully ensnare the insect. Then, the spider further subdues its prey by injecting it with venom and wrapping it securely in sheets of silk.



### ECOSYSTEM CONNECTIONS

In addition to their role as predators, these spiders and their egg cases often fall prey to birds, snakes, and even praying mantises. Additionally, certain species of smaller spiders can use black-and-yellow garden spider webs as their own and may feed on the tiny insects caught in the web.



# Outdoor Calendar

❖ MISSOURI DEPARTMENT OF CONSERVATION ❖

## FISHING

### Black Bass

Impounded waters and most streams north of the Missouri River:

Open all year

Most streams south of the Missouri River:  
May 27, 2017–Feb. 28, 2018

### Bullfrogs, Green Frogs

June 30 at sunset–Oct. 31, 2017

### Nongame Fish Gigging

Streams and Impounded Waters,  
sunrise to midnight:

Sept. 15, 2017–Jan. 31, 2018

### Paddlefish

On the Mississippi River:  
Sept. 15–Dec. 15, 2017

### Trout Parks

Catch-and-Keep:  
March 1–Oct. 31, 2017

Catch-and-Release:  
Nov. 10, 2017–Feb. 12, 2018

## TRAPPING

### Beaver, Nutria

Nov. 15, 2017–March 31, 2018

### Other Furbearers

Nov. 15, 2017–Jan. 31, 2018

### Otters, Muskrats

Nov. 15, 2017–Feb. 20, 2018

### Rabbits

Nov. 15, 2017–Jan. 31, 2018

## Free MO Hunting and MO Fishing Apps

MO Hunting makes it easy to buy permits, electronically notch them, and Telecheck your harvest. MO Fishing lets you buy permits, find great places to fish, and ID your catch. Get both in Android or iPhone platforms at [short.mdc.mo.gov/Zi2](http://short.mdc.mo.gov/Zi2).



## HUNTING

### Bullfrogs, Green Frogs

June 30 at sunset–Oct. 31, 2017

### Coyote

Restrictions apply during April, spring turkey season, and firearms deer season.

Open all year

### Crow

Nov. 1, 2017–March 3, 2018

### Deer

Archery:

Sept. 15–Nov. 10, 2017

Nov. 22, 2017–Jan. 15, 2018

Firearms:

► Early youth portion (ages 6–15):

Oct. 28–29, 2017

► November portion:

Nov. 11–21, 2017

► Late Youth Portion (ages 6–15):

Nov. 24–26, 2017

► Antlerless Portion (open areas only):

Dec. 1–3, 2017

► Alternative Methods Portion:

Dec. 23, 2017–Jan. 2, 2018

### Dove

Sept. 1–Nov. 29, 2017

### Groundhog (woodchuck)

May 8–Dec. 15, 2017

### Pheasant

Youth (ages 6–15):

Oct. 28–Oct. 29, 2017

Regular:

Nov. 1, 2017–Jan. 15, 2018

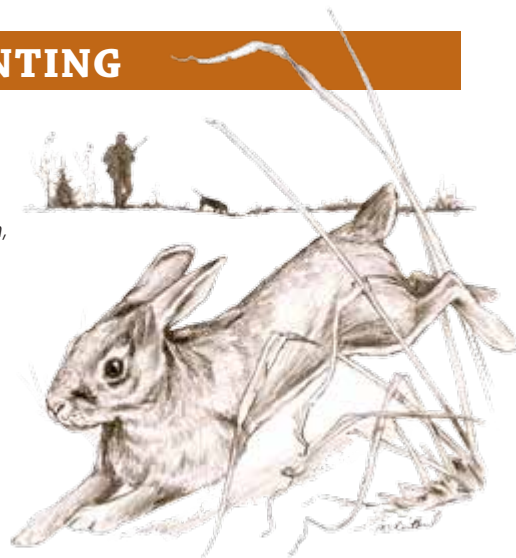
### Quail

Youth (ages 6–15):

Oct. 28–Oct. 29, 2017

Regular:

Nov. 1, 2017–Jan. 15, 2018



### Rabbit

Oct. 1, 2017–Feb. 15, 2018

### Sora, Virginia Rails

Sept. 1–Nov. 9, 2017

### Squirrel

May 27, 2017–Feb. 15, 2018

### Turkey

Archery:

Sept. 15–Nov. 10, 2017

Nov. 22, 2017–Jan. 15, 2018

Firearms:

► Fall: Oct. 1–31, 2017

### Waterfowl

See the Waterfowl Hunting Digest or visit [short.mdc.mo.gov/ZZx](http://short.mdc.mo.gov/ZZx) for more information.

### Wilson's (Common) Snipe

Sept. 1–Dec. 16, 2017

### Woodcock

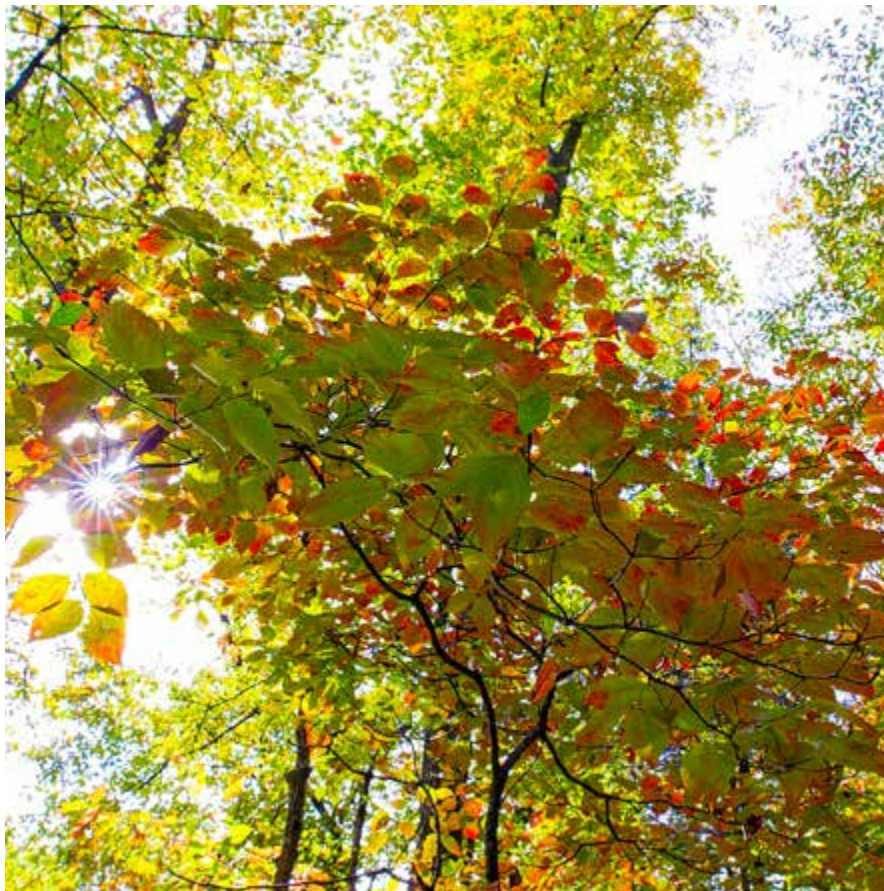
Oct. 15–Nov. 28, 2017

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code of Missouri* at [short.mdc.mo.gov/Zib](http://short.mdc.mo.gov/Zib). Current hunting, trapping, and fishing regulation booklets are available online at [short.mdc.mo.gov/ZZf](http://short.mdc.mo.gov/ZZf) or from local permit vendors.





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Take a hike this fall and look up at the forest's canopy. As the temperature cools, leaves, like the ones on this dogwood tree at Grasshopper Hollow Natural Area, will change from green to brilliant hues of yellow, orange, and red. Don't miss this seasonal showcase.

📷 by **Noppadol Paothong**